



Page 5-2

ADXC

- Two phase control
- IEC rated starter current Ie 12 to 45A
- IEC rated motor power 5.5-22kW at 400VAC and 9-37kW at 600VAC
- UL/CSA ratings 3 to 25HP at 400VAC and 10 to 40HP at 600VAC
- Built-in bypass relay
- Total protection against over temperature and wrong phase sequence
- Initial voltage, ramp up and ramp down time adjustable on front
- LED indication for starter status
- DIN rail and mount only 45mm wide.



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ADXB

- Three phase control
- For standard duty, IEC starting current 3.5•Ie
- IEC rated starter current Ie 22 to 231A ratings
- IEC rated motor power 9.2 to 110kW at 380/415VAC
- Reduced voltage soft starter with torque control and built-in bypass contactor
- Maximum starting current limitation
- PC remote control supervision
- Modbus-RTU and property ASCII communication protocols
- LCD backlit screen.



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ADXB

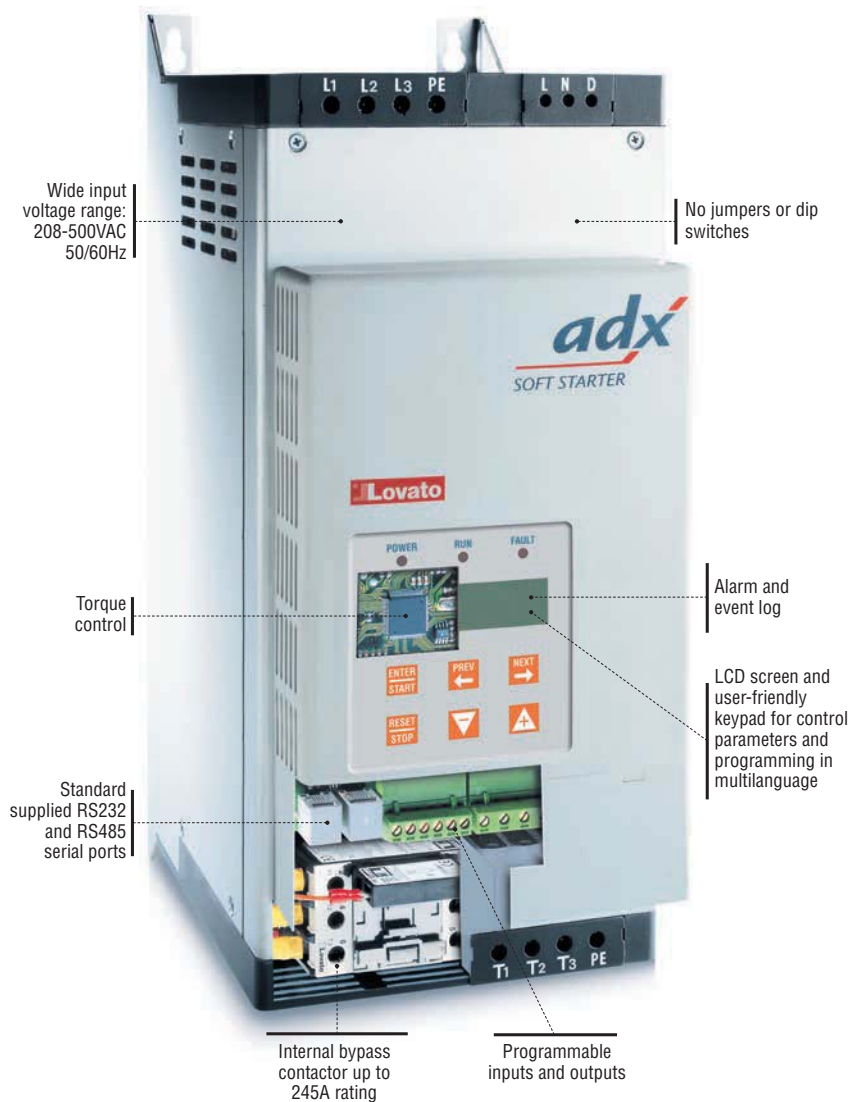
- Three phase control
- For severe duty, IEC starting current 5•Ie
- IEC rated starter current Ie 17 to 245A ratings
- IEC rated motor power 7.5 to 132kW at 380/415VAC
- Reduced voltage soft starter with torque control and built-in bypass contactor
- Maximum starting current limitation
- PC remote control supervision
- Modbus-RTU and property ASCII communication protocols
- LCD backlit screen.



Page 5-3

ADX

- Three phase control
- For severe duty, IEC starting current 5•Ie
- IEC rated starter current Ie 310A to 1200A ratings
- IEC rated motor power 160kW to 630kW at 380/415VAC
- Reduced voltage soft starter with torque control, predisposed for external bypass contactor
- Maximum starting current limitation
- PC remote control supervision
- Modbus-RTU and property ASCII communication protocols
- LCD backlit screen.





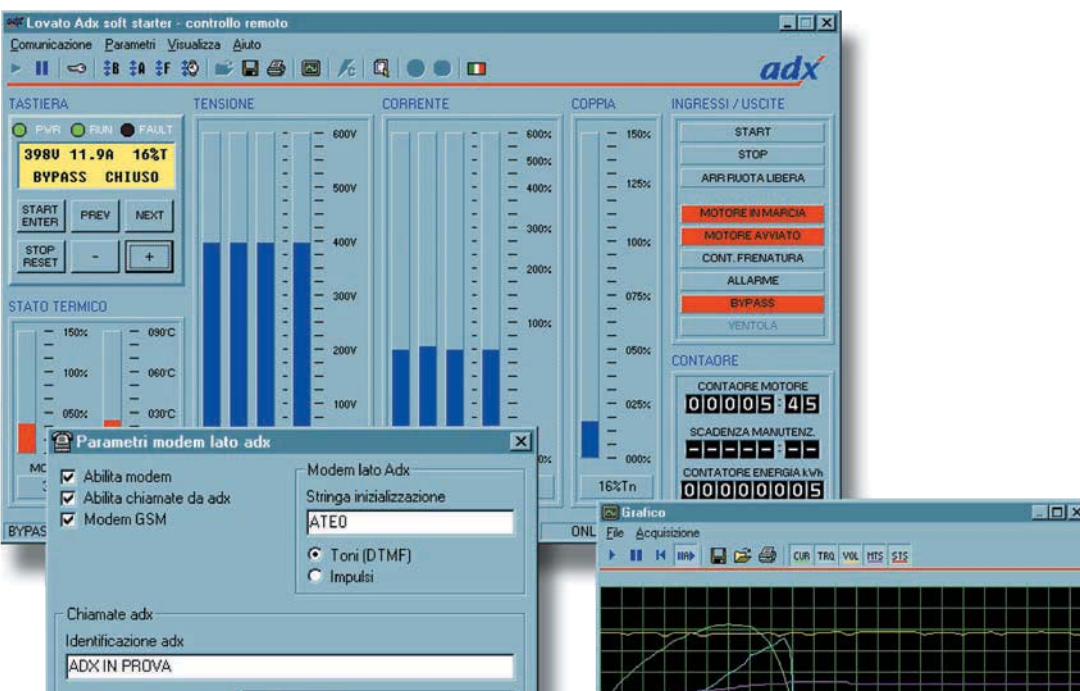
- 12A to 1200A starter ratings
- Standard and severe duty types
- Internal bypass contactor up to 245A rating
- Torque ramp starting
- Total motor protection incorporated
- Clock calendar
- Digital control and adjustment
- RS232 and RS485 serial ports for remote supervision and control
- Modbus®-RTU and proprietary ASCII communication protocols.

Soft starters

SEC. - PAG.

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ADX... type for severe duty predisposed for external bypass contactor	5 - 3
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ADXC type

5



ADXC 012...
ADXC 032...

new



ADXC 037...
ADXC 045...

new

new

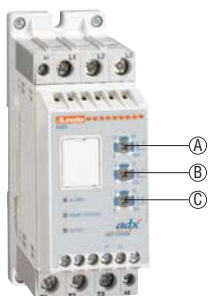
Current control

ADXC... gradually increases the current limit at 75% ramp-up time if the motor speed has yet to reach rated value, to avoid locked rotor state before time elapsing.

Typical settings

The following settings are standard ones for the different applications; they are for indication and reference purposes only. After the installation, it is recommended to always parameterise the soft starter with the motor connected to find the best settings and then test it. Initial voltage adjustment is the first operation followed by the ramp-up time setting and the ramp-down time is last, if any is required.

ADXC adjustments



Order code	IEC rated starter current	Rated motor power $\leq 40^{\circ}\text{C}$ ¹		Qty per pkg	Wt
	[A]	[kW]	[HP]	n°	[kg]

With built-in bypass relay. Three-phase 400VAC motor control. Auxiliary supply: starter 110...400VAC (L1-L2-L3 inputs); start command 110-400VAC (A1-A2 terminals).

ADXC 012 400	12	5.5	3	1	0.500
ADXC 016 400	16	7.5	7.5	1	0.500
ADXC 025 400	25	11	10	1	0.500
ADXC 032 400	32	15	15	1	0.500
ADXC 037 400	37	18.5	20	1	0.700
ADXC 045 400	45	22	25	1	0.700

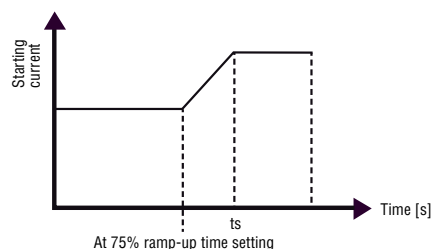
With built-in bypass relay. Three-phase 400VAC motor control. Auxiliary supply: starter 110...400VAC (L1-L2-L3 inputs); start command 24VAC/DC (A1-A2 terminals).

ADXC 012 400 24	12	5.5	3	1	0.500
ADXC 016 400 24	16	7.5	7.5	1	0.500
ADXC 025 400 24	25	11	10	1	0.500
ADXC 032 400 24	32	15	15	1	0.500
ADXC 037 400 24	37	18.5	20	1	0.700
ADXC 045 400 24	45	22	25	1	0.700

With built-in bypass relay. Three-phase 600VAC motor control. Auxiliary supply: starter 100...240VAC (A1-A2 separate 1-phase); start command 100-240VAC (ST terminals). With 2 relay outputs.

ADXC 012 600 R2	12	9	10	1	0.500
ADXC 016 600 R2	16	11	15	1	0.500
ADXC 025 600 R2	25	20	20	1	0.500
ADXC 032 600 R2	32	22	30	1	0.500
ADXC 037 600 R2	37	30	30	1	0.700
ADXC 045 600 R2	45	37	40	1	0.700

¹ For operating temperature higher than 40°C, derate starter power; see values given in the technical characteristics on page 5-8, in Rated current in per IEC/FLA current per UL.



Type of application	Initial voltage [%]	Time setting	
		Ramp up [s]	Ramp down [s]
Hydraulic lift	40	2	0
Piston compressor	40	3	0
Screw compressor	50	10	0
Scroll compressor	40	1	0
Low inertia fan	40	10	0
High inertia fan	40	15-20	0
Pump	40	10	10
Centrifugal blower	40	5	0
Conveyor	50	1	5

- (A) Initial voltage: 0-85% of the motor control power.
- (B) Ramp up time: 1-20 seconds. Initial to maximum load voltage time.
- (C) Ramp down time: 0-20 seconds. Maximum to no load voltage time.

General characteristics

ADXC... is a compact type of soft starter, 45mm wide and easy to use, for three phase squirrel-cage induction motors; soft starts and soft stops rated motor load currents up to 45A.

It is based on a current limiting starting methodology to limit the maximum starting current. ADXC... reduces the mechanical load on motor shafts, gearboxes and drive belts.

Ramp up, ramp down and initial voltage time settings can be independently adjusted by built-in potentiometers.

Main features are:

- For three phase induction motors up to 22kW / 25HP at 400VAC and 37kW / 40HP at 600VAC
- Maximum input voltage: 400VAC 50/60Hz for ADX...400...; 600VAC 50/60Hz for ADXC...600...
- Built-in bypass relay
- Wrong phase sequence and over temperature protection
- Alarm for wrong phase sequence; line voltage and/or frequency out of limits (over and undervoltage); overcurrent, over temperature, irregular ramp up and current flow during bypass; motor voltage unbalance
- Simple setting and installation
- 2 relay outputs for alarms (NC) and bypass closing (NO) for ADXC...600 R2
- 35mm DIN rail mounting (IEC/EN 60715)
- Ideal for hydraulic lifts, conveyor belts, compressors, pumps, hoisting devices, blowers, fans, mixers.

Operational characteristics

- Number of controlled phases: 2
- Input voltage L1-L2-L3:
 - 220-400VAC -15%...+10% for ADXC...400 and ADXC...400 24
 - 220-600VAC -15%...+10% for ADXC...600 R2
- Frequency range: 50/60Hz $\pm 10\%$ self-configurable
- Self powered for ADXC...400... types
- Separate single phase auxiliary power supply A1-A2: 100-240VAC -15%...+10% for ADXC...600 R2
- Start command:
 - A1-A2 24VAC/DC $\pm 10\%$ (ADX...400 24)
 - A1-A2 110...400VAC -15%...+10% (ADX...400)
 - ST 100...240VAC -15%...+10% (ADX...600 R2)
- Ramp up time: 1-20 seconds
- Ramp down time: 0-20 seconds
- Initial voltage: 0-85%
- 3 indication LEDs "alarm" (red - alarm conditions with diverse number of flashes), "ramp/bypass" (yellow - flashing in ramp phase / constantly on with bypass relay connected) and "supply" (green - constantly on with power supply flow)
- Degree of protection: IEC IP20.

Certifications and compliance

Certifications obtained: UL Listed for USA and Canada (cULus - File E223223) under Solid State Motor Controllers as reduced voltage starters; EAC and CCC pending completion at time of catalogue printing. Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-4-2, UL 508, CSA C22.2 n°14.

ADX type



51 ADX 0022BP - 51 ADX 0048BP
51 ADX 0017B - 51 ADX 0045B



51 ADX 0058BP - 51 ADX 0092BP
51 ADX 0060B - 51 ADX 0085B



51 ADX 0114BP - 51 ADX 0126BP
51 ADX 0110B - 51 ADX 0125B

Order code	IEC rated starter current Ie	IEC rated motor power (380/415V)	Qty per pkg	Wt
	[A]	[kW]	n°	[kg]

For standard duty (starting current $3.5 \cdot I_e$).
With integrated bypass contactor.
Auxiliary supply: starter Us 208-240VAC;
start command 24VDC.

51 ADX 0022BP	22	9.2	1	7.900
51 ADX 0034BP	34	15	1	8.000
51 ADX 0048BP	48	22	1	8.300
51 ADX 0058BP	58	26	1	14.900
51 ADX 0068BP	68	30	1	14.900
51 ADX 0082BP	82	37	1	14.900
51 ADX 0092BP	92	45	1	15.700
51 ADX 0114BP	114	55	1	15.700
51 ADX 0126BP	126	63	1	28.000
51 ADX 0150BP	150	75	1	36.000
51 ADX 0196BP	196	92	1	36.000
51 ADX 0231BP	231	110	1	36.000

For severe duty (starting current $5 \cdot I_e$).
With integrated bypass contactor.
Auxiliary supply: starter Us 208-240VAC;
start command 24VDC.

51 ADX 0017B	17	7.5	1	7.900
51 ADX 0030B	30	15	1	8.000
51 ADX 0045B	45	22	1	8.300
51 ADX 0060B	60	30	1	14.900
51 ADX 0075B	75	37	1	14.900
51 ADX 0085B	85	45	1	14.900
51 ADX 0110B	110	55	1	15.700
51 ADX 0125B	125	59	1	15.700
51 ADX 0142B	142	75	1	34.000
51 ADX 0190B	190	90	1	37.000
51 ADX 0245B	245	132	1	37.000

For severe duty (starting current $5 \cdot I_e$).
Predisposed for external bypass contactor.
Auxiliary supply: starter Us 208-240VAC;
start command 24VDC.

51 ADX 0310	310	160	1	50.000
51 ADX 0365	365	200	1	50.000
51 ADX 0470	470	250	1	90.000
51 ADX 0568	568	315	1	90.000
51 ADX 0640	640	355	1	110.000
51 ADX 0820	820	440	1	170.000
51 ADX 1200	1200	630	1	185.000

General characteristics

ADX is a reduced voltage soft starter with torque control and maximum starting current limit. It is used for the progressive starting and stopping of asynchronous three-phase squirrel-cage motors.

The integrated bypass contactor ADX...BP or ADX...B types, drastically limits dissipation, as a result, equipment for electric panel cooling ventilation can be eliminated and the enclosure size can be reduced as well.

CONTROL

During starting: Torque control acceleration, current limit control and booster.

During stopping: Torque control deceleration, dynamic braking and free-wheel.

In emergency conditions: Starting without protection direct-on-line starting using integrated bypass contactor.

Remote control: PC supervision by connection with RS232/RS485 converter, modem or GSM modem.

Automatic call function (Autocall) in case of alarm conditions by sending a message to a cellular phone (SMS-Short Message Service) and/or to a mailbox. Property ASCII and Modbus®-RTU communication protocols.

KEYPAD OPERATIONS

- Liquid-crystal backlit 2-line 16-character display
- Multilanguage capability (Italian, English, French, Spanish)
- Basic, advanced and function programming menus
- Keypad stop and start
- Motor and mains parameter readings:
 - line voltage values (L-L)
 - phase current
 - active and apparent power values per phase
 - power factor per phase
 - kWh
- Time sequential events log
- Clock calendar with backup battery.

PARTICULAR FUNCTIONS

Digital inputs and programmable relay outputs. Analog input (0...10V, 0...20mA or 4...20mA) for ramp acceleration and/or deceleration, motor start and stop control thresholds, programmable relay enable and disable control thresholds. Analog output (0...10V, 0...20mA or 4...20mA) for current, torque, motor thermal status and power factor readings. Input programming for second motor.

PROTECTION

- Motor: Dual thermal protection class (one during starting phase and the other during running) or by PTC sensor, locked rotor, current asymmetry, minimum torque and starting time too long
- Auxiliary voltage: Voltage value too low
- Power voltage: Phase failure, phase sequence and frequency out of limits
- Control inputs and analog output: Static 24VDC short-circuit protection with automatic resetting.
- Starter: Overcurrent, high temperature, SCR and by-pass contactor malfunction.

Operational characteristics

- Number of phases controlled: 3
- Input voltage:
 - 208-500VAC $\pm 10\%$ for ADX...BP and ADX...B^①
 - 208-415VAC $\pm 10\%$ for ADX...B^②
- Mains frequency: 50-60Hz $\pm 5\%$
- Auxiliary supply voltage: 208-240VAC $\pm 10\%$
- Auxiliary consumption: 20VA
- Rated starter current Ie:
 - 22-231A for ADX...BP
 - 17-245A for ADX...B
 - 310-1200A for ADX...
- Motor current: 0.5-1 Ie
- Overload current:
 - 105% Ie continuous for ADX...BP and ADX...B
 - 115% Ie continuous for ADX...

Certifications and compliance

Certifications obtained: EAC for all; CCC for ADX 0110B and ADX 0125B types only.

Compliant with standard: IEC/EN 60947-1, IEC/EN 60947-4-2.

^① 208-600VAC $\pm 10\%$ on request.

^② Voltages on request: higher than 415V to 690V maximum.

Remote keypad for ADX... types



51 ADX TAST

Accessories for ADX... types



51C4



4PX1

Order code	Description	Qty per pkg	Wt
		n°	[kg]
51 ADX TAST	Remote keypad 96x96mm, 2x16 backlit LCD, 208-240VAC supply c/w 3m/10ft long connecting cable	1	0.350
51 C2	PC ↔ ADX connecting cable, 1.8m/6ft long	1	0.090
51 C3	PC ↔ GSM modem connecting cable, 1.8m/6ft long ^①	1	0.210
51 C4	PC ↔ 4 PX1 converter drive connecting cable, 1.8m/6ft long	1	0.147
51 C5	ADX ↔ Analog modem connecting cable, 1.8m/6ft long ^①	1	0.111
51 C6	ADX ↔ 4 PX1 converter drive connecting cable, 1.8m/6ft long	1	0.102
51 C7	ADX ↔ GSM modem "FUNK-ANLAGEN" ^① connecting cable, 1.8m/6ft long	1	0.101
51 C8	ADX ↔ remote keypad connecting cable, 3m/10ft long	1	0.081
4 PX1	RS232/RS485 converter drive, opto-isolated, 220-240VAC ^②	1	0.600
31 PA 96X96	Protective cover (IP54)	1	0.077

^① Consult Customer Service for modem details; see contact details on inside front cover.

^② RS232/RS485 opto-isolated converter drive, 38,400 Baud-rate maximum, automatic or manual TRANSMIT line supervision, 220-240VAC ±10% supply (110-120VAC available on request).

General characteristics

The flush-mount ADX TAST remote keypad is identical to the one on board the soft starter except for the start and stop controls of the motor, which are permanently disabled. With this keypad, starter setup can be conducted, motor readings and operating data displayed and data and parameter transfer (ADX ↔ remote keypad) made as well.

A backup copy of the starter data and parameter setup is obtainable with the transfer functions. As a result quick and easy setup operations can be done especially with machines assembled in series.

The baud transmission rate, the contrast and backlight can also be adjusted by this keypad.

It is supplied standard with a 3m long cable and suitable connectors to complete the link to the ADX RS485 port. The three terminals of the keypad supply are removable.

For longer distances, this keypad can be connected to the ADX RS232 port via RS232/RS485 converter.

Advantages

- Flush mount
- Messages in selectable language
- Readings display
- Parameter setup
- Two-way data and parameter transfer.

Operational characteristics

- Auxiliary supply voltage: 208-240VAC ±10%
- Power consumption: 6.9VA
- Dissipation: 3.2W
- Mains frequency: 50/60Hz
- RS485 port: RJ44 connector
- Supply: Removable 3-pole 2.5 mm² terminal block.
- Display: 2 line, 16 character backlit LCD
- LED indication (3): POWER, RUN and FAULT
- Keys (6) ENTER/START, RESET/STOP, ←PREVIOUS, NEXT→, ▼ and ▲
- Ambient conditions
 - Operating temperature: -10...+60°C
 - Storage temperature: -20...+70°C
- Flush mount enclosure
- Degree of protection on front: IP41; IP54 with protective cover.

Certifications and compliance

Certifications obtained: EAC.
Compliant to standards: IEC/EN 61000-6-1 and IEC/EN 61000-6-3 for 4 PX1 types.

Remote control software for ADX... types



51 ADX SW

Order code	Description	Qty per pkg	Wt
		n°	[kg]
51 ADX SW	PC-ADX remote control software with proprietary ASCII and Modbus® RTU protocols and a set of connecting cables 51 C2, 51 C3, 51 C5, 51 C7 for communications via RS232 port, analog or GSM modem	1	0.550

The remote control software consents to the PC supervision of all ADX soft starter functions, including: parameter setup, real-time readout display, graphics of monitored parameter data during operation and starter events log display, each with time and date entry.

The PC-ADX connection is made by cable via the RS232 port, RS232/RS485 converter, analog or GSM modem. The RS232 port is not suitable for permanent connections. The connection via modem permits the ADX starter to advise alarm conditions, that is an automatic link to the remote PC. GSM modem represents the ultimate solution for unmanned applications or where there are no telephone lines. Interesting communication features are available with this type of modem, such as:

- SMS (Short Message Service): At alarm conditions, the ADX can send its ID and alarm code, with time and date entry. The advantage is the possibility of reaching service people, without delay, wherever they are located.
- Email (via Internet): a message with the same structure as mentioned above can be transmitted to a specified mailbox. The advantages of this type of message with respect to the SMS are that any communication, received through Internet mail server, is permanent and a vast number of these can be received and reviewed at any time.

General characteristics

- Display of all the monitored data by the ADX starter
- Virtual ADX keypad with access to all functions
- Parameter adjustment, only accessible with password, saving on disc and subsequent reloading on ADX starter
- Display of starter events log showing time and date entry
- Graphic display of monitored data during operation
- Connection through RS232/RS485 converter or modem
- GSM-modem management with SMS or e-mail transmission
- AUTOCALL function for automatic PC call
- Program configuration in 4 languages (Italian, English, Spanish and French)
- Easy installation and setup.

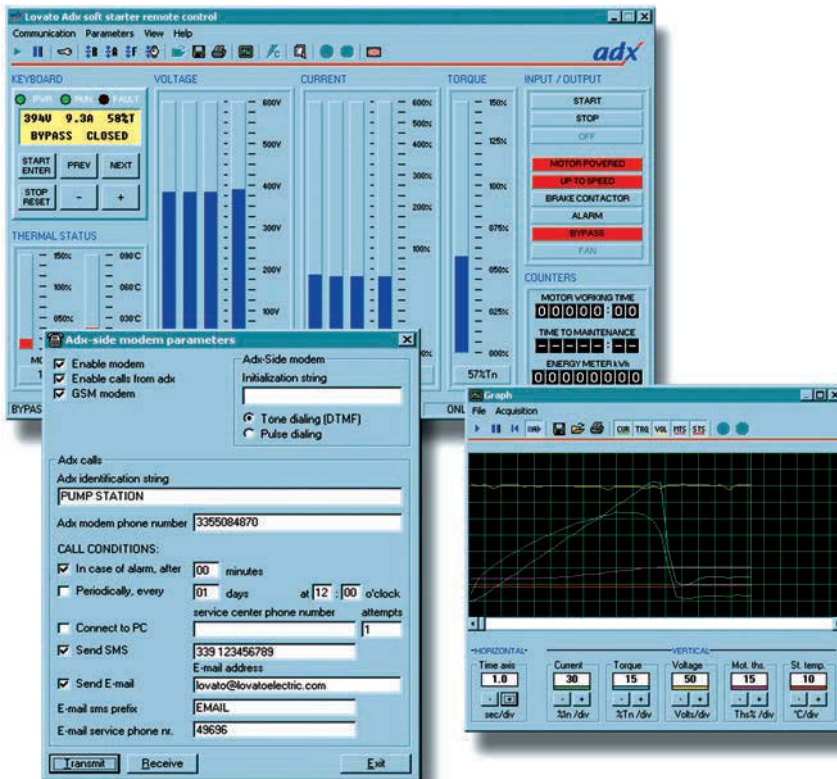
Advantages

- GSM network management for inaccessible applications where there are no telephone lines
- Call management during alarm conditions for SMS or email transmission
- No limit for remote control distance
- Possibility of remote motor starting
- Reduction of service time
- Reduction of maintenance and downtime.

Operational characteristics

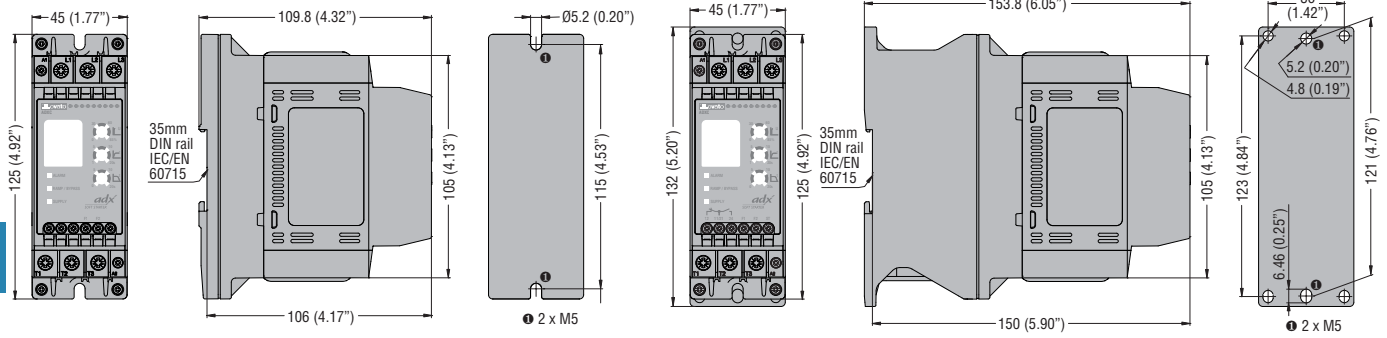
- Minimum hardware requirements of the personal computer:
- Windows 95/98 operating system
 - Minimum Pentium 100MHz or processor
 - Minimum 16MB of free RAM
 - About 4MB of free hard disk memory
 - Graphic card having at least 800x600 resolution
 - One free serial interface port
 - CD-ROM drive.

Example of main window frame using 51 ADX SW remote control software

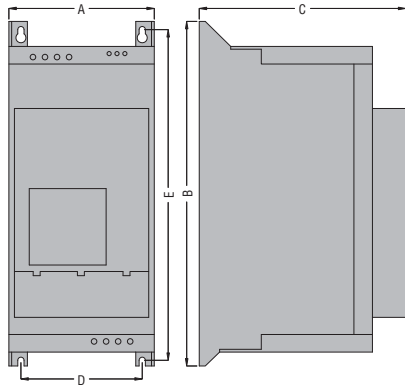


Soft Starters ADXC012...ADXC032...

ADXC037...ADXC045...

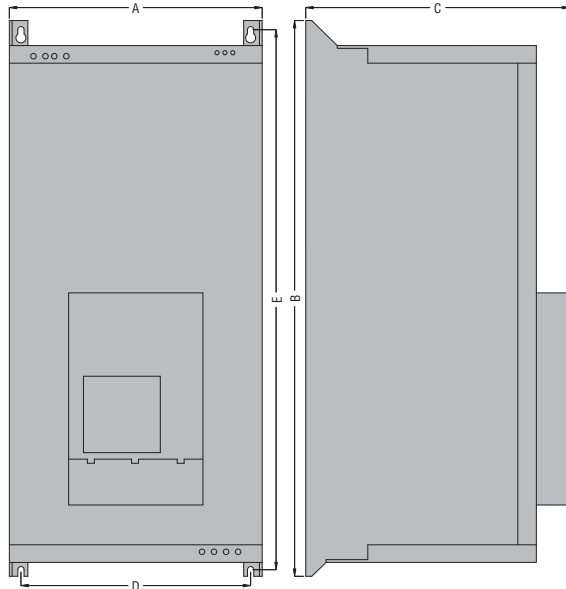


ADX 0022BP - ADX 0126BP ADX 0017B - ADX 0125B



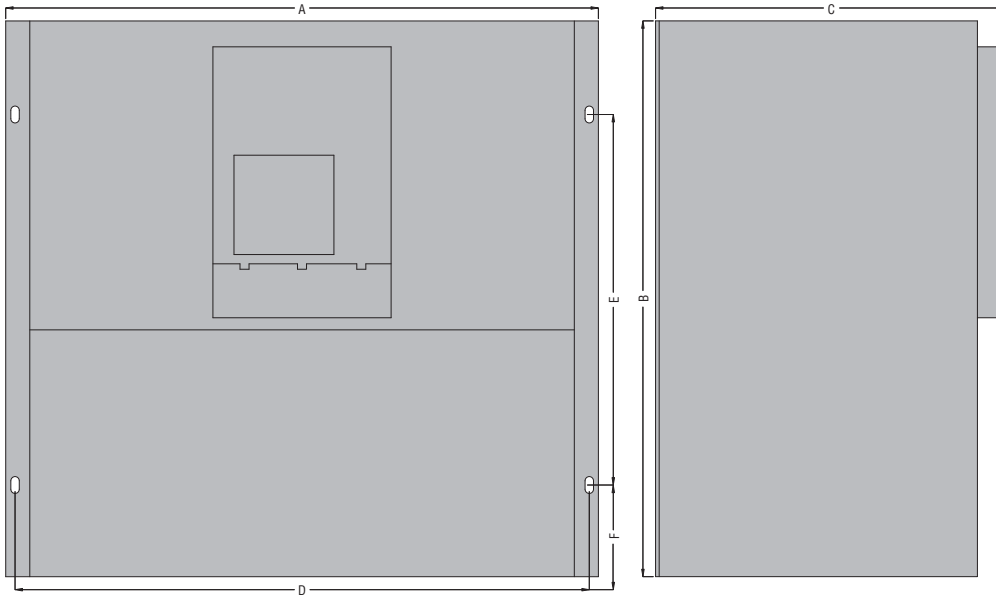
TYPE	A	B	C	D	E
ADX 0022BP	157 (6.18")	372 (14.64")	223 (8.78")	131 (5.16")	357 (14.05")
ADX 0034BP	157 (6.18")	372 (14.64")	223 (8.78")	131 (5.16")	357 (14.05")
ADX 0048BP	157 (6.18")	372 (14.64")	223 (8.78")	131 (5.16")	357 (14.05")
ADX 0058BP	157 (6.18")	534 (21.02")	250 (9.84")	132 (5.20")	517 (20.35")
ADX 0068BP	157 (6.18")	534 (21.02")	250 (9.84")	132 (5.20")	517 (20.35")
ADX 0082BP	157 (6.18")	534 (21.02")	250 (9.84")	132 (5.20")	517 (20.35")
ADX 0092BP	157 (6.18")	534 (21.02")	250 (9.84")	132 (5.20")	517 (20.35")
ADX 0114BP	157 (6.18")	584 (22.99")	250 (9.84")	132 (5.20")	567 (22.32")
ADX 0126BP	157 (6.18")	584 (22.99")	250 (9.84")	132 (5.20")	567 (22.32")
ADX 0017B	157 (6.18")	372 (14.64")	223 (8.78")	131 (5.16")	357 (14.05")
ADX 0030B	157 (6.18")	372 (14.64")	223 (8.78")	131 (5.16")	357 (14.05")
ADX 0045B	157 (6.18")	372 (14.64")	223 (8.78")	131 (5.16")	357 (14.05")
ADX 0060B	157 (6.18")	534 (21.02")	250 (9.84")	132 (5.20")	517 (20.35")
ADX 0075B	157 (6.18")	534 (21.02")	250 (9.84")	132 (5.20")	517 (20.35")
ADX 0085B	157 (6.18")	534 (21.02")	250 (9.84")	132 (5.20")	517 (20.35")
ADX 0110B	157 (6.18")	584 (22.99")	250 (9.84")	132 (5.20")	567 (22.32")
ADX 0125B	157 (6.18")	584 (22.99")	250 (9.84")	132 (5.20")	567 (22.32")

ADX 0150BP - ADX 0231BP ADX 0142B - ADX 0245B



TYPE	A	B	C	D	E
ADX 0150BP	273 (10.75")	600 (23.62")	285 (11.22")	230 (9.05")	640 (25.20")
ADX 0196BP	273 (10.75")	680 (26.77")	310 (12.20")	230 (9.05")	640 (25.20")
ADX 0231BP	273 (10.75")	680 (26.77")	310 (12.20")	230 (9.05")	640 (25.20")
ADX 0142B	273 (10.75")	600 (23.62")	285 (11.22")	230 (9.05")	560 (25.20")
ADX 0190B	273 (10.75")	680 (26.77")	310 (12.20")	230 (9.05")	640 (25.20")
ADX 0245B	273 (10.75")	680 (26.77")	310 (12.20")	230 (9.05")	640 (25.20")

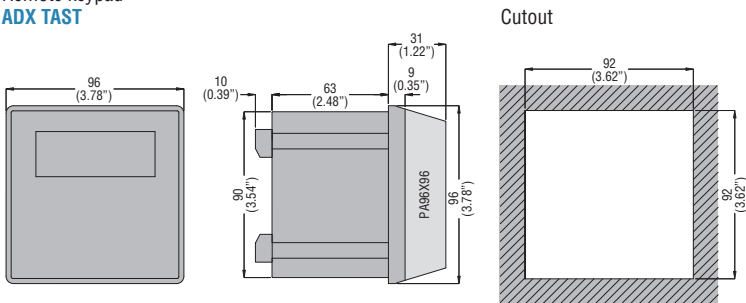
Soft Starters ADX 0310 - ADX 1200



TYPE	A	B	C	D	E	F
ADX 0310	640 (25.20")	600 (23.62")	380 (14.96")	620 (24.41")	400 (15.75")	100 (3.94")
ADX 0365	640 (25.20")	600 (23.62")	380 (14.96")	620 (24.41")	400 (15.75")	100 (3.94")
ADX 0470	790 (31.10")	650 (25.59")	430 (16.93")	770 (30.31")	450 (17.72")	100 (3.94")
ADX 0568	790 (31.10")	650 (25.59")	430 (16.93")	770 (30.31")	450 (17.72")	100 (3.94")
ADX 0640	790 (31.10")	650 (25.59")	430 (16.93")	770 (30.31")	450 (17.72")	100 (3.94")
ADX 0820	910 (35.83")	950 (37.40")	442 (17.40")	830 (32.68")	920 (36.22")	100 (3.94")
ADX 1200	910 (35.83")	950 (37.40")	442 (17.40")	830 (32.68")	920 (36.22")	100 (3.94")

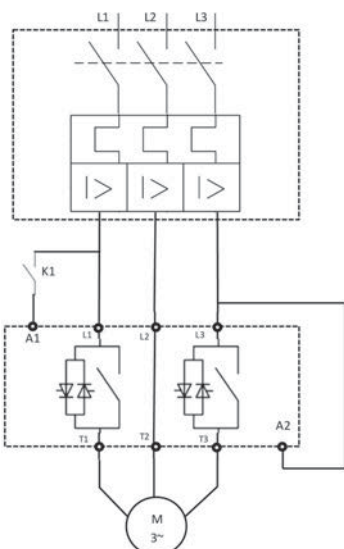
● Consult Customer Service; see contact details on inside front cover.

Remote keypad ADX TAST

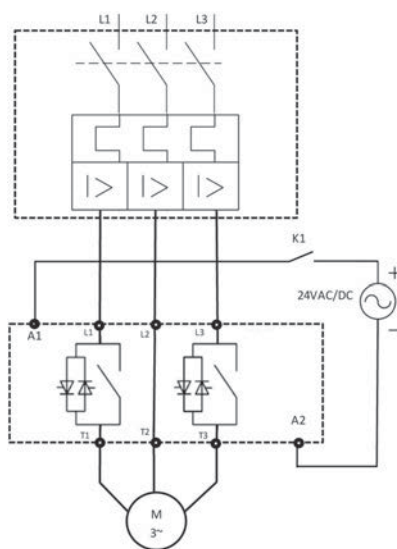


Wiring diagrams

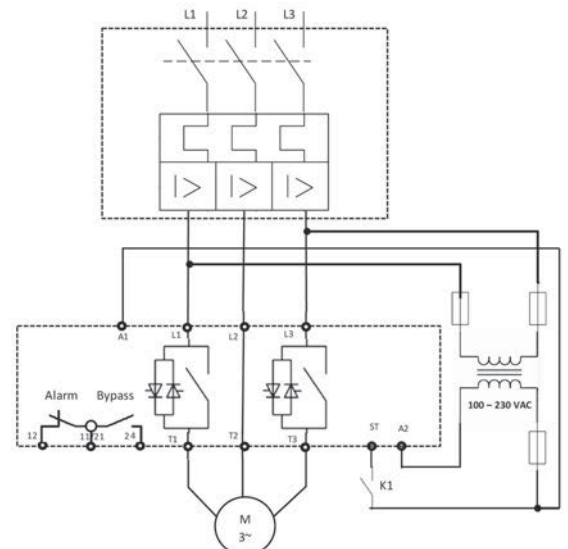
ADXC...400



ADXC...400 24



ADXC...600 R2



5

TYPE		ADXC012	ADXC016	ADXC025	ADXC032	ADXC037	ADXC045
		With built-in bypass relay			With built-in bypass relay		
Motor	Type	Asynchronous three phase			Asynchronous three phase		
	Power (40°C) at 220...240VAC	3kW / 3HP	4kW / 5HP	5.5kW / 7.5HP	9kW / 10HP	9kW / 10HP	11kW / 15HP
	at 380...415VAC	5.5kW / 5HP	7.5kW / 7.5HP	11kW / 10HP	15kW / 15HP	18.5kW / 20HP	22kW / 25HP
	① at 440...480VAC	5.5kW / 7.5HP	9kW / 10HP	11kW / 15HP	18.5kW / 20HP	22kW / 25HP	22kW / 30HP
	① at 550...600VAC	9kW / 10HP	11kW / 15HP	20kW / 20HP	22kW / 30HP	30kW / 30HP	37kW / 40HP
Supply voltage	Input voltage U _e (L1-L2-L3)	220...400VAC -15...+10% (ADXC...400...); 220...600VAC -15...+10% (ADXC...600R2)					
	Start command U _c	A1-A2: 24VAC/DC ±10% (ADXC...40024); A1-A2: 110...400VAC -15...+10% (ADXC...400); ST: 100...240VAC -15...+10% (ADXC...600R2)					
	Auxiliary power U _s	Self powered for ADXC...400...; A1-A2: 100...240VAC -15...+10% separate single phase for ADXC...600R2					
	Frequency	50/60Hz ±10% self-configurable					
Undervoltage recovery		174VAC (for all)					
Overvoltage recovery		466VAC (ADXC...400...); 700VAC (ADXC...600R2)					
Control input current		0.4...1mA (ADXC...40024); 0.5...5mA (ADXC...400); 0.4...3mA (ADXC...600R2)					
Starting / stopping method		Voltage control					
Number of controlled phases		2					
Number of starts/hour at 40°C		20 (Overload cycle: AC53B: 3-5:175)			10 (Overload cycle: AC53B: 4-6: 354)		10 (Overload cycle: AC53B: 3.5-5: 335)
Minimum load current		1A	1A	5A	5A	5A	5A
Rated current I _n according to IEC test results)	at 40°C IEC	12A	16A	25A	32A	37A	45A
	at 50°C IEC	11A	15A	23A	28A	34A	40A
	at 60°C IEC	10A	13.5A	21A	24A	31A	34A
FLA current (based on UL test results)	at 40°C UL	12A	17A	25A	32A	32A	41A
	at 50°C UL	11A	15A	23A	28A	—	—
	at 60°C UL	10A	14A	21A	24,3A	—	—
Class RK5 fuse at 400V/600VAC	Max size	20A	20A	25A	35A	50A	50A
UL/CSA short circuit symmetrical		Suitable for use on circuit delivering no more than 5000A rms when protected by RK5 class fuse					
Motor protection		Wrong phase sequence					
Cooling system		Natural					
Status indication LEDs		1 red ALARM; 1 yellow RAMP/BYPASS; 1 green SUPPLY					
RELAY OUTPUTS (ADXC...600R2 only)							
NC alarm contact (11, 12)		3A 250VAC / 3A 30VDC					
NO bypass contact (21, 24)		3A 250VAC / 3A 30VDC					
INPUT POWER CIRCUIT CONNECTIONS (L1, L2, L3, T1, T2, T3)							
Number and type of terminals		6 fixed M4 screw					
Conductor cross section (min...max)		2.5...10mm ² (AWG 2x10...2x14)					
Tightening torque / Tool		2.5Nm (22lbin) / Pozidriv bit 2					
Cable stripping length		8mm / 0.31"					
AUXILIARY SUPPLY CONNECTIONS (A1, A2)							
Number and type of terminals		9 fixed M3 screw					
Conductor cross section (min...max)		0.5...1.5mm ² (AWG 10...18)					
Tightening torque / Tool		0.65Nm (5.3lbin) / Pozidriv bit 0					
Cable stripping length		6mm / 0.24"					
AUXILIARY CONNECTIONS (11, 12, 21, 24, ST, F1, F2)							
Type of terminals		M3 screw					
Conductor cross section (min...max)		0.05...1.5mm ² (with cable terminal) (AWG 14...12)					
Tightening torque / Tool		0.45Nm (4lbin) / Pozidriv bit 0					
Cable stripping length		6mm / 0.24"					
INSULATION							
IEC rated insulation voltage U _i		630VAC (ADXC...400...); 690VAC (ADXC...600R2)					
IEC rated impulse withstand voltage U _{imp}		2.5kV					
IEC Power frequency withstand voltage		2kV					
AMBIENT CONDITIONS							
Operating temperature		-20°C...+40°C with no derating; >40°C...+60°C with derating (see IEC/UL rated current values given above)					
Storage temperature		-40°C...+80°C					
Relative humidity		<95% non condensing at 40°C					
Maximum pollution degree		2					
Installation category		III					
Maximum altitude		1000m					
HOUSING							
Mounting		Screw fixing on mounting plate or on 35mm DIN rail (IEC/EN 60715)					
IEC degree of protection		IP20					

① Valid for ADXC...600R2 types.

TYPE		ADX...BP - ADX...B (with integrated by-pass contactor)	ADX... (prearranged for external by-pass contactor)
Motor	Type	Asynchronous three phase	
	Power	9.2-110kW (ADX...BP) 7.5-132kW (ADX...B)	160-630kW
	Rated current	22-231 (ADX...BP) 17-245A (ADX...B)	310-1200A
Supply voltage	Power circuit	208 - 500VAC ±10% standard (208-600VAC ±10% on request)	208 - 415VAC ±10% standard Other voltages up to 690VAC maximum on request)
	Rated supply voltage	208 - 240VAC ±10%	208 - 240VAC ±10%
	Frequency	50 or 60Hz ±5% self-configurable	
Starting	Torque ramp with maximum current control		
Stopping	Free wheel or torque ramp deceleration		
Braking	DC dynamic by external contactor		
Protection	Auxiliary supply	Voltage too low	
	Power supply	Phase failure, frequency out of limits, minimum and maximum voltage and phase sequence, 24VDC static short circuit	
	Motor	Overload at starting (trip class 2, 10A, 10, 15, 20, 25, 30, 35 and 40), overload during running (trip class 2, 10A, 10, 15, 20, 25 and 30), locked rotor, current asymmetry, minimum torque and maximum starting time	
	Starter	Overcurrent and high temperature	
	Analog inputs and outputs	24VDC static short circuit	
Functions	Clock calendar (RTC)	With back-up battery	
	Event log	20 event registrations in date and time sequential order	
	Operating data memory	Hour counter, one each for energy usage, number of startings, motor running and maintenance expiry	
	Multilanguage capability	Italian / English / Spanish / French	
Setup configuration	By incorporated or remote keypad or PC		
Keyboard	Display and LED indicators	LCD, 2 line x 16 character, backlight, POWER, RUN, FAULT	
	Membrane keys	ENTER/START, RESET/STOP, PREVIOUS, NEXT, ▲ and ▼	
	Setup parameters	Adjustment menus: basic, advanced, functions, clock and controls	
	Readings display	Voltage, current, power factor (cosφ), torque, power (kVA, kW, kvar) and energy usage	
	Graphic display	Current and torque	
Control inputs	Display	Operating status, events, alarms, event log, data	
	Voltage	24VDC (no need for external feeder)	
	Fixed functions	2 for starting and stopping/reset	
	Multifunction input (digital functions)	Free-wheel stopping, external alarm, motor preheat, on board control, alarm inhibition, thermal protection manual reset, cascade starting and keypad lock	
Relay outputs	Multifunction input (analog functions)	Motor protection via PTC probes, acceleration and/or deceleration ramp via analog input, analog input thresholds for motor starting and stopping, analog input thresholds for programmable relay enable and disable, PT100 input thresholds for motor starting and stopping and PT100 input thresholds for programmable relay enable and disable	
	Voltage and capacity	250VAC 5A (AC1)	
	Fixed functions	1 with 1 NO + 1NC (2 SPST) contacts for overall alarm	
Analog output	Programmable functions	3 each with 1 NO (SPST) contact for running motor, motor starting, braking, current tripping threshold, maintenance expiry, etc.	
	Format configuration	0-20mA, 4-20mA or 0-10V	
Communications interface	Associated source	Current, torque, motor thermal status and power factor	
	RS232 port	Setup and remote control	
IEC degree of protection	RS485 port	Used for remote keypad only	
	IP00❶		
Cooling system	Natural	Types ADX0022BP-48BP and ADX0017B-45B	—
	Forced	Types ADX0058BP-231BP and ADX0060B-245B	All types
AMBIENT CONDITIONS			
Operating temperature		-10...+45°C (higher up to maximum 55°C with derating)	
Storage temperature		-30°...+70°C	
Maximum altitude		1000m (higher up with derating)	
Maximum pollution degree		3	
Operating position		Vertical ±15°	

❶ IEC IP20 for ADX0022BP to ADX0126BP and ADX0017B to ADX0125B only.